## This Page Is Inserted by IFW Operations and is not a part of the Official Record

## BEST AVAILABLE IMAGES

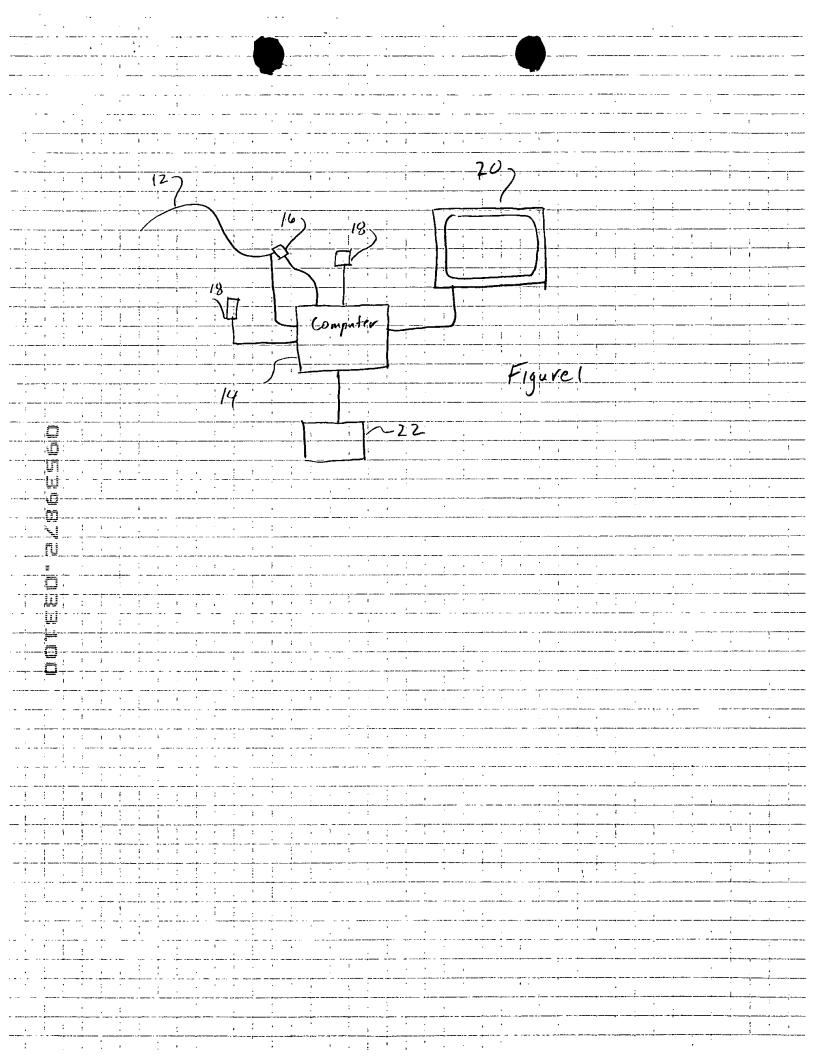
Defective images within this document are accurate representations of the original documents submitted by the applicant.

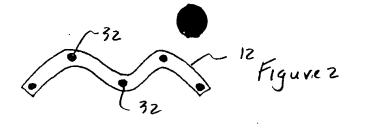
Defects in the images may include (but are not limited to):

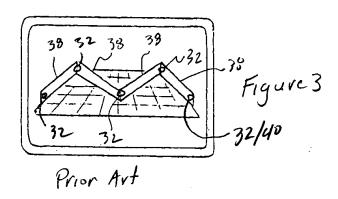
- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

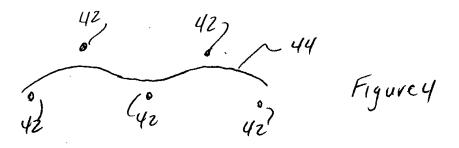
## IMAGES ARE BEST AVAILABLE COPY.

As rescanning documents will not correct images, please do not report the images to the Image Problems Mailbox.









Sample Tape Sensor Outputs Sample Locator Output Figure 5 Mop Outputs
To Curve Control
Points And
Position Display Curve

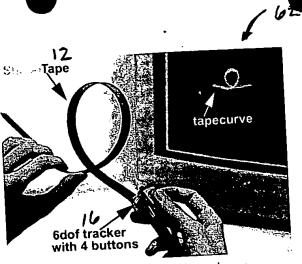
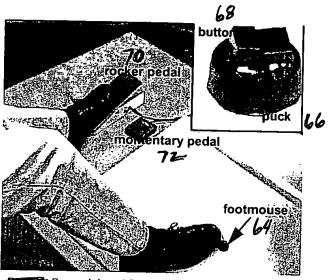


Fig. ShapeTape controlling a 3d virtual curve.

Figure 6

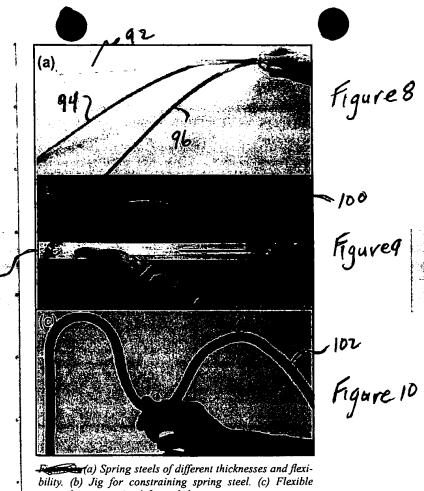
ŗ....



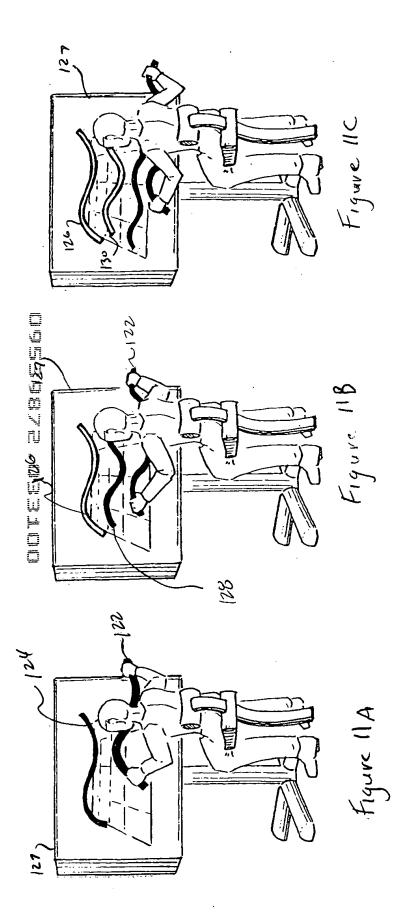
E.

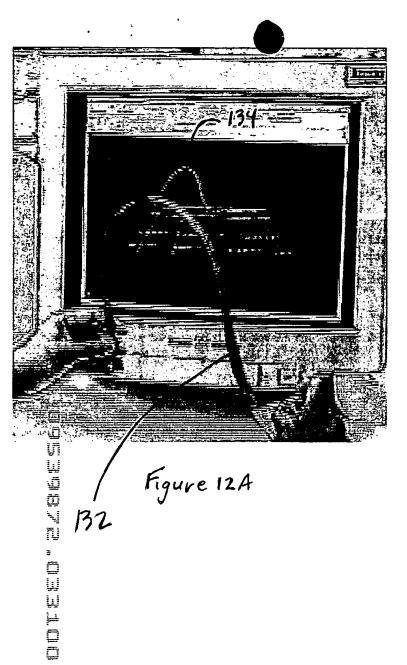
Foot pedals and footmouse. Inset picture is a closeup of the custom designed footmouse puck.

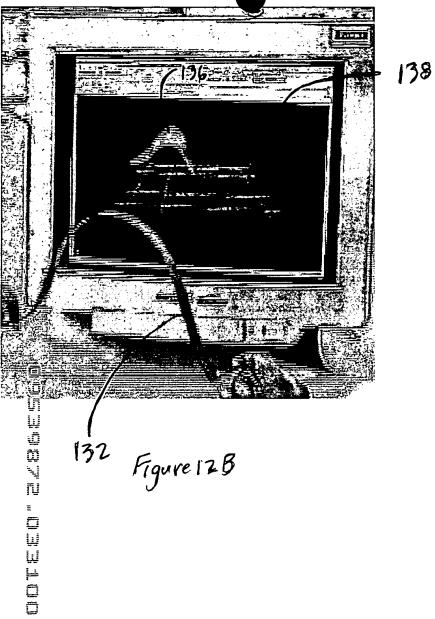
Figure 7

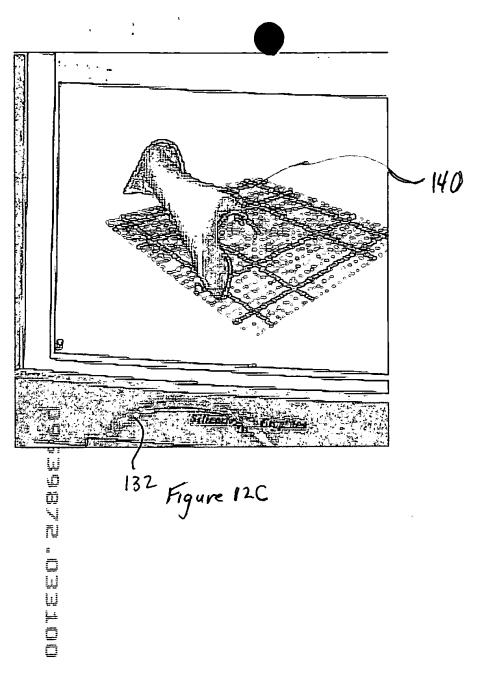


(a) Spring steels of different thicknesses and flexibility. (b) Jig for constraining spring steel. (c) Flexible curve that retains its deformed shape.

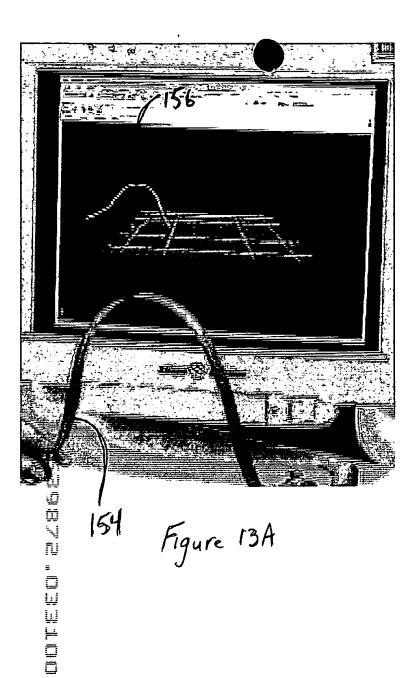


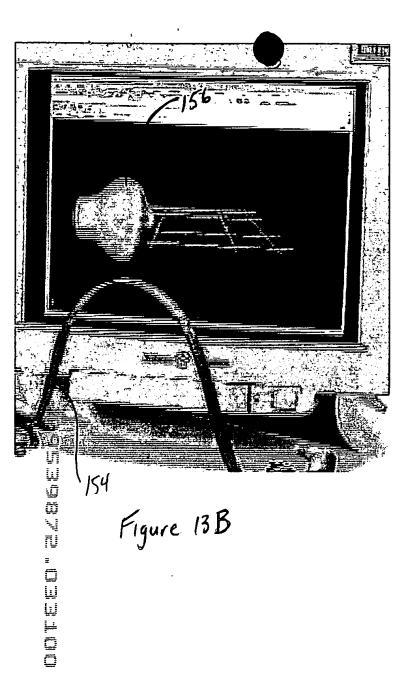






.







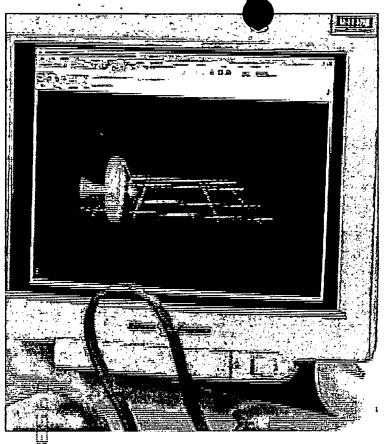
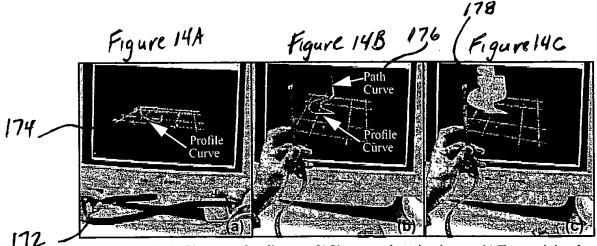


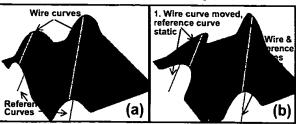
Figure 13C

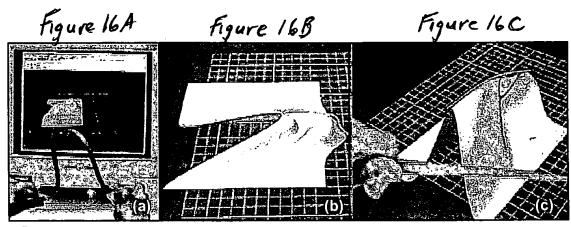


Extrude. (a) Placement of profile curve. (b) Placement of initial path curve. (c) The extruded surface can be interactively manipulated to explore different shapes, positions, and orientations.

Figure 15A

Figure 15B





Surface deformations using ShapeTape. (a) Bend of wire curve deforming a surface. (b) Bend and position of wire curve deforming a surface. The reference curve is static. (c) Twist of wire curve deforming a surface.

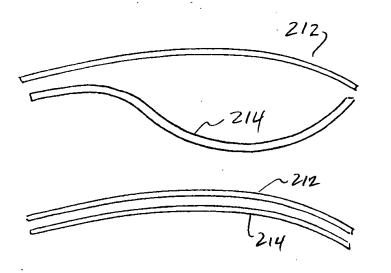
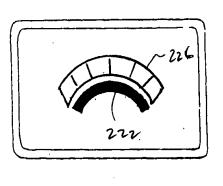
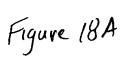


Figure 17A

Figure 17B







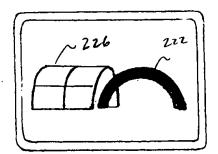
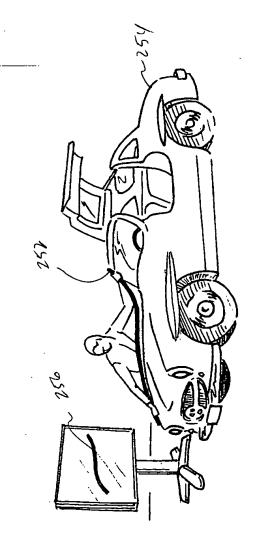




Figure 18 B



Flgure 20